Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed

1.1. Name of the Data, data collection Project, or data-producing Program:

Applying new genetic approaches to improve quality of population assessment of green and loggerhead turtles

1.2. Summary description of the data:

As the NOAA-Fisheries? National Sea Turtle Genetics Lab, the SWFSC Marine Turtle Genetics Program has the lead responsibility for generating, analyzing and interpreting genetic data to address the scientific and management needs for the agency. These include determining genetic stock structure of Pacific and Atlantic marine turtle species, nesting stock origin of turtles caught incidentally in U.S.-based fisheries in both ocean basins, stock composition of foraging populations, and of strandings along both coasts. This project addresses data gaps in understanding of stock structure and population connectivity for green and loggerhead turtles. Significant progress has also been made characterizing stock structure and phylogeography with new nuclear markers (SNPs) (Roden et al. 2009) and 760bp mtDNA sequence fragments. Extensive work is now needed to expand similar analysis with longer (760bp) sequences on green turtles in the Atlantic, Mediterranean and Indian Oceans in order to improve stock assessments globally. For example, green turtle rookeries from the southwestern Indian Ocean, the western coast of Africa, Ascension Island, and islands of the Brazilian coast are all dominated by haplotype CM-A8 (Bjorndal et al. 2006; Formia et al. 2006; Bourjea et al. 2007; Formia et al. 2007). Furthermore, although our Pacific work has greatly improved capacity to conduct meaningful MSA by providing a more comprehensive rookery (source stock) baseline data set, there is still considerable error associated with stock assignment of bycatch in certain regions, particularly where small sample sizes require assignment of individual animals. This is the case for the American Samoa longline fishery, where there is still considerable haplotype overlap between rookeries spanning a wide range of the Pacific even with longer (760bp) sequence fragments.

This project continues to reanalyze phylogeography and stock structure for Atlantic/ Mediterranean green turtle rookeries using novel, expanded mtDNA CR sequences, and to integrate and expand efforts to distinguish common CR haplotypes through mitogenomic sequencing for both loggerheads and green turtles. We also are using Next Generation Sequencing (NGS) technologies to accelerate progress to identify new

nuclear (SNP) markers for both species. The goal of this research is complete an assessment of the genetic stock structure, and define the units to conserve to ultimately inform ESA Status Reviews and produce a comprehensive baseline dataset for loggerheads and green turtle rookeries that will allow the broader research community to finally move forward with numerous foraging ground and fisheries bycatch stock assignment studies (particularly Gulf of Mexico and Atlantic regions) that have been stalled until rookery stock structure is adequately characterized. Products include 1) a comprehensive standardized database with mtDNA haplotype data, and a reference database of loggerhead and green turtle mitogenome sequences from rookeries sampled; 2) New nuclear SNP markers identified for loggerhead and green turtles.

1.3. Is this a one-time data collection, or an ongoing series of measurements?
Ongoing series of measurements

1.4. Actual or planned temporal coverage of the data:
2012 to Present

1.5. Actual or planned geographic coverage of the data:
Pacific, Indian Ocean, Mediterranean Sea and Atlantic Ocean

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
tbd

1.7. Data collection method(s):
(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)
Instrument: computer
Platform: desktop
Physical Collection / Fishing Gear: n/a

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:
Peter H Dutton

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:
Southwest Fisheries Science Center

2.4. E-mail address:
peter.dutton@noaa.gov

2.5. Phone number:
(858) 546-5636

3. Responsible Party for Data Management
Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:
Peter H Dutton

3.2. Title:
Data Steward

4. Resources
Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?
No

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):
Unknown

5. Data Lineage and Quality
NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible
(describe or provide URL of description):
Lineage Statement:
All steps from sample collection, DNA extraction and genetic analysis are tracked and standard QA protocols are followed. Standard Operating Procedure documents are on file

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):
Standard laboratory QA/QC procedures are performed. Standard Operating Procedure (SOP) documents are on file for various steps

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

Yes

6.1.1. If metadata are non-existent or non-compliant, please explain:

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:

https://inport.nmfs.noaa.gov/inport/item/18742

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NMFS Data Documentation Procedural Directive: https://inport.nmfs.noaa.gov/inport/downloads/data-documentation-procedural-directive.pdf

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

No

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

No

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

none

7.2. Name of organization of facility providing data access:

Southwest Fisheries Science Center

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:
https://swfsc.noaa.gov/MMTD-Turtles/

7.3. Data access methods or services offered:
Contact PI

7.4. Approximate delay between data collection and dissemination:
1 yr

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:
(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)
Other

8.1.1. If World Data Center or Other, specify:
SWFSC

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):
Southwest Fisheries Science Center - La Jolla, CA

8.3. Approximate delay between data collection and submission to an archive facility:
4 weeks

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?
Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection
Stored in a secure server.

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.